DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	ATWOOD POND	Lake Area (ha):	0.81
Town:	SANDWICH	Maximum depth (m):	4.6
County:	Carroll	Mean depth (m):	1.4
River Basin:	Merrimack	Volume (m^3):	11000
Latitude:	43°52'42" N	Relative depth:	4.5
Longitude:	71°33'19" W	Shore configuration:	1.32
Elevation (ft):	1510	Areal water load (m/yr):	69.45
Shore length (m):	420	Flushing rate (yr^{-1}):	50.00
Watershed area (ha):	88.6	P retention coeff.:	0.30
% watershed ponded:	0.0	Lake type:	artificial

BIOLOGICAL:		19 February 1997	8 July 1996
DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 95%	DINOBRYON 65%
	#2		PERIDINIUM 20%
	#3		
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			11.03
DOM. ZOOPLANKTON (% TOTAL)	#1	CYCLOPOID COPEPOD 43%	KERATELLA 56%
	#2		KELLICOTTIA 26%
	#3		
ROTIFERS/LITER		19	553
MICROCRUSTACEA/LITER		25	89
ZOOPLANKTON ABUNDANCE (#/L)		44	642
VASCULAR PLANT ABUNDANCE			Scattered
SECCHI DISK TRANSPARENCY (m)			3.0
BOTTOM DISSOLVED OXYGEN (mg/L)		5.4	0.4
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

weakly stratified

Depth of thermocline (m): None
Hypolimnion volume (m^3) : None
Anoxic volume (m^3) : 90

CHEMICAL:

Lake: ATWOOD POND
Town: SANDWICH

	19 February 1997		8 July 1996		
DEPTH (m)	1.5		1.5		3.0
pH (units)	5.9		5.9		5.8
A.N.C. (Alkalinity)	4.7		2.1		2.3
NITRATE NITROGEN	< 0.05		< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	0.44		0.37		0.31
TOTAL PHOSPHORUS	0.013		0.021		0.017
CONDUCTIVITY (μmhos/cm)	27.9		21.8		23.3
APPARENT COLOR (cpu)	36		50		50
MAGNESIUM			0.34		
CALCIUM			1.9		
SODIUM			< 1.0		
POTASSIUM			< 0.40		
CHLORIDE	< 2		< 2		< 2
SULFATE	4		4		4
TN : TP	34		18		18
CALCITE SATURATION INDEX			4.8		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1996

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
**	3	1	2	6	Meso.

COMMENTS:

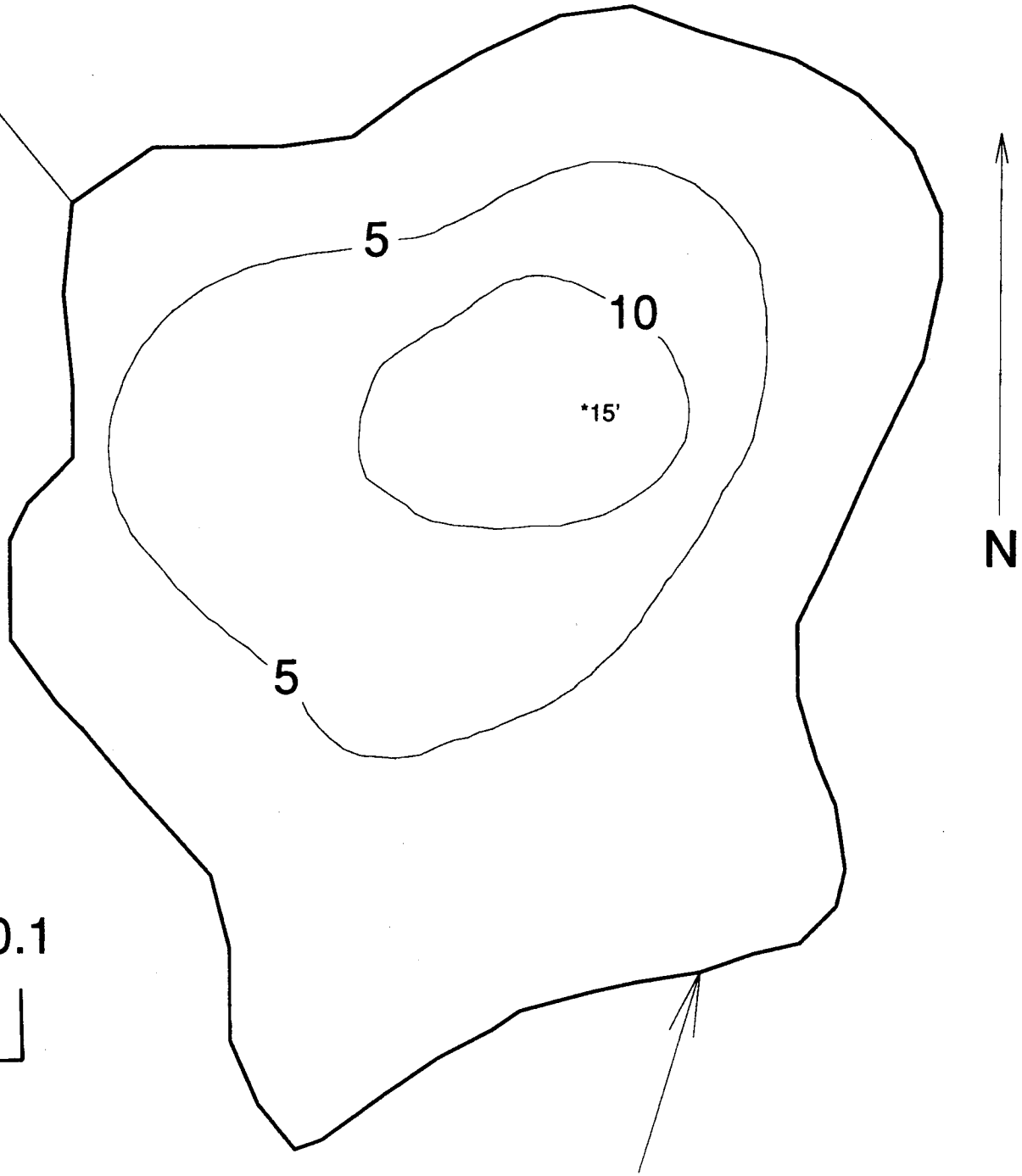
1. This is a small, remote pond, located off the Sandwich Notch Road within the White Mountain National Forest, that was surveyed jointly with the NH Fish and Game Department.

2. This is a somewhat acid, tea-colored beaver pond.

3. This is a relatively productive pond at both the primary (higher than average chlorophyll) and secondary (high zooplankton counts particularly rotifers) trophic levels. Phosphorus levels were also somewhat high for a remote pond, probably due to beaver activity and decomposing organic matter.

Atwood Pond

Sandwich



III-4

5 foot depth contours

0 0.1

Km

FIELD DATA SHEET

LAKE: ATWOOD POND
DATE: 07/08/96

TOWN: SANDWICH
WEATHER: PARTLY CLOUDY

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	21.2	8.0	90 %
	1.0	18.2	7.4	78 %
	2.0	15.8	9.3	92 %
	3.0	13.0	3.2	30 %
	4.0	10.2	0.4	4 %

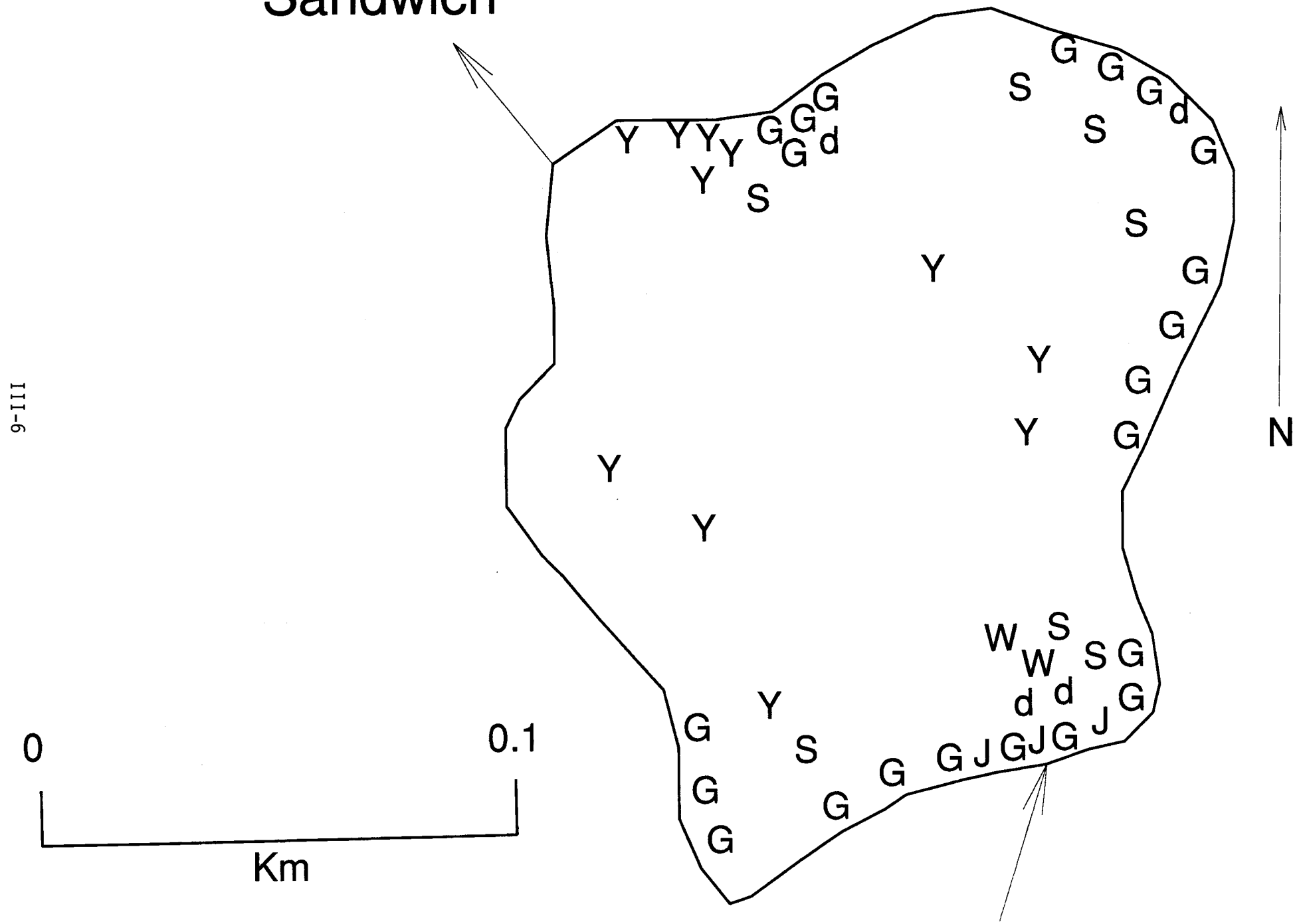
SECCHI DISK (m): 3.0
BOTTOM DEPTH (m): 4.1
TIME: 1000

COMMENTS: An 11 ^{0}C. temperature difference existed between surface and bottom waters, but no thermocline or thermal layers were present.

*Dissolved oxygen values are in mg/L

Atwood Pond

Sandwich



AQUATIC PLANT SURVEY

LAKE: ATWOOD POND TOWN: SANDWICH DATE: 07/08/96

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
Y	Nuphar	Yellow water lily	Scattered
G	Gramineae	Grass family	Scattered
S	Sparganium	Bur reed	Scattered
d	Dulichium arundinaceum	Three-way sedge	Sparse
W	Potamogeton	Pondweed	Sparse
J	Juncus	Rush	Sparse

OVERALL ABUNDANCE: Scattered

GENERAL OBSERVATIONS:

1. This is a boggy beaver pond surrounded by spruce, pine and birch, with a shrubby wet meadow located along the inlet stream at the south end of the pond.

2. Sterile thread-like bottom growth occurred along the northern shore but is not depicted on the map.

3. Several newts were observed in the water.